

REMARKS

Claims 1, 2, 4-9, 16-17 and 19-33 are pending and under consideration in the above-identified application. Claims 3, 10-15 and 18 were previously cancelled and remain cancelled.

In the Office Action of September 7, 2010, claims 1, 2, 4-9, 16-17 and 19-33 were rejected. In the Advisory Action of January 25, 2010, the Examiner upheld these rejections.

With this Amendment, claims 1, 16, 27, 30, 32 and 33 are amended.

I. 35 U.S.C. § 102 Anticipation and § 103 Obviousness Rejections of Claims

Claims 1, 2, 4-8, 16, 17, 19-23 and 27-33 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Fox* (U.S. Patent No. 6,566,697).

Claims 9 and 24 were rejected under 35 U.S.C. § 103(a) as being obvious in view of *Fox*.

Claim 25 was rejected under 35 U.S.C. § 103(a) as being obvious in view of *Fox* and *Fossum* (U.S. Patent No. 6,624,456).

Claim 26 was rejected under 35 U.S.C. § 103(a) as being obvious in view of *Fox* and *Applicant Admitted Prior Art* (“*AAPA*”).

In relevant part, each of the independent claims 1, 16, 27, 30, 32 and 33 recite a solid state imaging device where the drain transistor has a different channel voltage than the transfer transistor.

This is clearly unlike *Fox* which fails to disclose or even suggest a solid state imaging device where a drain transistor has a different channel voltage than a transfer transistor. Instead, *Fox* discloses the depletion of the N portion of a photodiode by **selecting the implant doses of the photodiode** such that the n region can be completely voided of majority carriers while the p surface region is not completely voided. See, U.S. Pat. No. 6,566,697, Col. 9, l. 6-27. This cannot fairly be viewed as disclosing a solid state imaging device where a drain transistor has a different channel voltage than a transfer transistor because *Fox* only discloses adjusting the doping profile of the photodiode so that a portion of the photodiode can be depleted by a drain or transfer transistor while another portion retains a charge without disclosing anything pertaining to relationship of the transfer transistor channel voltage to the drain transistor channel voltage.

Fossum and *AAPA* do not disclose anything pertaining a solid state imaging device where a drain transistor has a different channel voltage than a transfer transistor.

As the Applicant's specification teaches, by providing a solid state imaging device where a drain transistor has a different channel voltage than a transfer transistor, the photodiode is completely drained even though the transfer transistor and drain transistor are not perfectly matched, U.S. Pat. Pub. No. 2004/0130757, Para. [0114]. Because *Fox*, *Fossum*, and *AAPA* fail to disclose this feature, they do not provide the same benefit. .

Therefore, because *Fox*, *Fossum*, *AAPA* and any possible combination of them fails to disclose or even fairly suggest every feature of claims 1, 16, 27, 30, 32 and 33, the rejection of claims 1, 16, 27, 30, 32 and 33 cannot stand. Because claims 2, 4-9, 17 and 19-26, 31 depend, either directly or indirectly, from claims 1, 16, 27, 30, 32 and 33, they are allowable for at least the same reasons.

II. Conclusion

In view of the above amendments and remarks, Applicant submits that the claims are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

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